

REMARKS

Claims 1-17 remain pending in this application, with claims 1 and 17 being independent.

Claim Rejections under 35 USC § 102(b)

Claims 1-17 stand rejected under 35 USC § 102(b) as being anticipated by JP Patent No. 11-281869 ("Fujii"). Applicants respectfully disagree. To anticipate a claim, the reference must teach every element of the claim and "the identical invention must be shown in as complete detail as contained in the ... claim." *MPEP 2131* citing *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989).

Fujii does not teach every element of claim 1, which requires the following step elements:

- (A) receiving input to change the position of a selected one of the focus lens and the zoom lens group; and
- (B) separately controlling the positions of the focus lens and the zoom lens group along the optical axis such that the focus lens and the zoom lens approach no closer to one another than a selected minimum safe distance, for any selected magnification provided by the zoom lens group and the focus lens.

Fujii also does not teach every element of claim 17, which requires the following step elements:

- (A) receiving input to change the position of the zoom lens group;
- (B) determining the initial position of the focus lens and the focal distance associated with said initial position;
- (C) determining the initial position of the second zoom lens;
- (D) moving the second zoom lens a discrete amount along the optical axis to a new position in the direction associated with said step of receiving input;
- (E) determining a permissible working range along the optical axis;

- (F) for each selected magnification of the zoom lens group and focus lens, moving the focus lens to the best focus position within said permissible working range, wherein the best focus position within said permissible working range achieves focus at said new position of said second zoom lens; and
- (G) repeating said moving the second zoom lens, said determining a permissible working range and said moving the focus lens until the second zoom lens has reached a final position associated with said step of receiving input.

On page 3 and 4 of the pending office action, the Examiner has recited a long list of claim features which are supposedly shown in Fujii Figures 1-5, but which are not, in fact, disclosed or suggested by Fujii either in the figures or in the corresponding text. For example, claim 1 requires that a focus lens and a zoom lens do not approach closer to one another than a "selected minimum safe distance." Similarly, claim 17 requires the feature of "permissible working range." Fujii is absolutely silent as to these features.

Note first the Fujii admits collision between focal lens 3 and group lens 33 may occur in Figures 1-2. See Fujii, paragraph 41. Fujii then describes operation of Figures 3-5 and explains how, by operating thereto, collision avoidance may be obtained. A close reading of these sections – Fujii, paragraphs 42-91 – shows that there is not once mentioned any minimum safe distance achieved, taught or suggested by Fujii. In fact Fujii teaches away from the invention of both claims 1, 17 by requiring system control of the focus lens and zoom lens according to a "tracking curve." See Fujii, paragraphs 48 and 52. According to Fujii, therefore, by controlling these lenses one at a time, to the tracking curve, power consumption is achieved with a side benefit of collision avoidance; there is however no teaching whatsoever of "minimum safe distance" or "permissible working range."

Now, let's consider more closely what this means. In accord with Figures 2-4 of the present specification, it is clear that a permissible working range is determined (step 306) and then the focus lens is moved to a best focus position (step 308) within the permissible working range. Figure 3 encompasses these steps and describe a

method for providing the minimum safe distance. See paragraph 12 of the present specification.

Clearly, Fujii has no disclosure at all of these steps. Best focus is not mentioned – at all - within Fujii, for example. The present invention therefore may concern much more careful control of focusing between focus lens and zoom lens without collision. See, e.g., the iterative processing of best focus according to a figure of merit, paragraph 34 of the present specification. Moreover, since Fujii preloads a tracking curve within memory (per for example paragraphs 48, 52 of Fujii), clearly there is no active step of determining a permissible working range as presently claimed.

Fujii cannot therefore anticipate independent claims 1, 17 since it does not teach or suggest the elements of these claims. Since there is no teaching or suggestion of all claim limitations, as required in independent claims 1 and 17, 35 U.S.C. §102 fails. Reconsideration of claims 1, 17 are requested.

Claims 2-16 depend from claim 1 and benefit from like arguments. Moreover, these claims have additional features that patentably distinguish over Fujii. For example, as previously mentioned, Fujii is silent to determining a permissible working range, as in claim 4, or moving the focus lens to the best focus position within said permissible working range, as in claim 5.

Fujii is also silent as to the steps of claim 6, which require: selecting a focus figure of merit; moving the focus lens in one direction along the optical axis; tracking the position of the focus lens along the optical axis; if the focus figure of merit increases, moving the focus lens again in said one direction to a final position that is no further than a boundary of said permissible working range; and if the focus figure of merit decreases, moving the focus lens again in a direction opposite said one direction to a final position that is no further than a boundary of said permissible working range. Where for example does Fujii disclose a focus figure of merit? Fujii has no disclosure of this and thus, again, fails under 35 U.S.C. §102.

Continuing, Fujii has no disclosure of a final position substantially corresponding to a position on the optical axis where a peak value of the focus figure of merit is reached, as in claim 7, or the boundary of the permissible working range, as in claim 8.

In claim 12, the method includes moving at least one zoom lens a discrete amount along the optical axis to a new position in the direction associated with received input. Fujii is for example silent as to moving discrete amounts as in a stepper motor (see paragraph 20 of the present specification).

Continuing, claim 13 requires the following steps that are also absent from Fujii:

determining a permissible working range along the optical axis; and
moving the focus lens to the best focus position within said permissible working range, wherein the best focus position within said permissible working range achieves focus for said initial focal distance at said new position of said at least one zoom lens.

In claim 14, the steps include repeating movement the zoom lens, repeating determining a permissible working range, and repeating movement of the focus lens until at least one zoom lens has reached a final position associated with the received input. Fujii, again, is silent to such features.

Claim 16 requires:

moving the focus lens to a home position; and
moving the zoom lens group such that the second zoom lens moves to a second zoom lens retracted position, said moving the zoom lens group performed after said moving the focus lens, wherein said second zoom lens retracted position is substantially at a minimum safe distance from the home position along the optical axis.

Again, Fujii does not disclose the features of claim 16.

Since Fujii does not teach or suggest the limitations of claim 2-16, reconsideration is again requested.

Claims 1-17 stand rejected under 35 USC § 102(b) as being anticipated by JP Patent No. 2001-033683 ("Takaoka"). Again, we respectfully disagree.

Once again, on page 5-7 of the pending office action, the Examiner has recited a long list of claim features (corresponding to claims 1-17) which are supposedly shown in Takaoka Figures 1-4, but which are not, in fact, disclosed or suggested by Takaoka either in the figures or in the corresponding text. Again, claim 1 requires that a focus lens and a zoom lens do not approach closer to one another than a "selected

minimum safe distance." Similarly, claim 17 requires the feature of "permissible working range." Takaoka is silent as to these features.

Takaoka discloses a zoom lens, with sleeves 32, 34 arranged without collision according to a "prescribed minimum value." See Takaoka abstract. The entire Takaoka invention concerns shaft structure to support the focus and zoom lens. See Takaoka, paragraphs 16 and 21 (common shaft 51, 52). Thus Takaoka explains in paragraphs 26-38 (describing figure 4), how this occurs – through use of the cam curve of figure 3. Paragraph 31 of Takaoka describes how collision between sleeves 32, 34 is achieved by restricting migration of focus and zoom lenses 12, 14. Unlike claims 1, 17, a "maximum point blank range" is determined between the lenses. See Takaoka, paragraphs 18, 29. The limit of migration is restricted in the case that the subject is less than 80cm. Takaoka, paragraph 33; see also Figure 3.

According, Takaoka too does not disclose the elements of claim 1, which requires the following:

- (A) receiving input to change the position of a selected one of the focus lens and the zoom lens group; and
- (B) separately controlling the positions of the focus lens and the zoom lens group along the optical axis such that the focus lens and the zoom lens approach no closer to one another than a selected minimum safe distance, for any selected magnification provided by the zoom lens group and the focus lens.

For example, Takaoka has no disclosure or teaching of separately controlling positions of focus and zoom lenses according to a minimum safe distance and selected magnification. Takaoka

Takaoka also does not teach every element of claim 17, which requires the following step elements:

- (A) receiving input to change the position of the zoom lens group;
- (B) determining the initial position of the focus lens and the focal distance associated with said initial position;
- (C) determining the initial position of the second zoom lens;

- (D) moving the second zoom lens a discrete amount along the optical axis to a new position in the direction associated with said step of receiving input;
- (E) determining a permissible working range along the optical axis;
- (F) for each selected magnification of the zoom lens group and focus lens, moving the focus lens to the best focus position within said permissible working range, wherein the best focus position within said permissible working range achieves focus at said new position of said second zoom lens; and
- (G) repeating said moving the second zoom lens, said determining a permissible working range and said moving the focus lens until the second zoom lens has reached a final position associated with said step of receiving input.

For example, Takaoka has no disclosure of best focus or achieving focus within a permissible working range.

Reconsideration of claims 1, 17 are thus requested.

Claims 2-16 depend from claim 1 and benefit from like arguments. Moreover, these claims have additional features that patentably distinguish over Takaoka. For example, as previously mentioned, Takaoka is silent to determining a permissible working range, as in claim 4, or moving the focus lens to the best focus position within said permissible working range, as in claim 5.

Takaoka is also silent as to the steps of claim 6, which require: selecting a focus figure of merit; moving the focus lens in one direction along the optical axis; tracking the position of the focus lens along the optical axis; if the focus figure of merit increases, moving the focus lens again in said one direction to a final position that is no further than a boundary of said permissible working range; and if the focus figure of merit decreases, moving the focus lens again in a direction opposite said one direction to a final position that is no further than a boundary of said permissible working range. Like Fujii, Takaoka also does not disclose a focus figure of merit and, again, fails under 35 U.S.C. §102.

Continuing, Takaoka has no disclosure of a final position substantially corresponding to a position on the optical axis where a peak value of the focus figure

of merit is reached, as in claim 7, or the boundary of the permissible working range, as in claim 8.

In claim 12, the method includes moving at least one zoom lens a discrete amount along the optical axis to a new position in the direction associated with received input. Takaoka is for example silent as to moving discrete amounts as in a stepper motor (see paragraph 20 of the present specification).

Continuing, claim 13 requires the following steps that are also absent from Takaoka:

determining a permissible working range along the optical axis; and
moving the focus lens to the best focus position within said permissible working range, wherein the best focus position within said permissible working range achieves focus for said initial focal distance at said new position of said at least one zoom lens.

In claim 14, the steps include repeating movement the zoom lens, repeating determining a permissible working range, and repeating movement of the focus lens until at least one zoom lens has reached a final position associated with the received input. Takaoka is silent to such features.

Claim 16 requires:

moving the focus lens to a home position; and
moving the zoom lens group such that the second zoom lens moves to a second zoom lens retracted position, said moving the zoom lens group performed after said moving the focus lens, wherein said second zoom lens retracted position is substantially at a minimum safe distance from the home position along the optical axis.

Again, Takaoka does not disclose the features of claim 16. Where for example does Takaoka disclose a "minimum safe distance"?

Since Takaoka does not teach or suggest the limitations of claim 2-16, reconsideration is again requested.

Claims 1-17 stand rejected as obvious pursuant to non-statutory double patenting of U.S. Patent No. 6,714,731. A terminal disclaimer is enclosed herewith to obviate this rejection. Reconsideration is requested.

In the Drawings

Applicants have amended Figure 1 to add "Prior Art" and hereby submits Replacement Sheet 1/3 hereto.

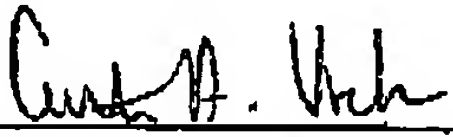
Conclusion

Based on the foregoing, it is submitted that the Applicants' inventions as defined by claims 1-17 are patentable over the art of record. Issuance of a Notice of Allowance is solicited. Applicants' attorney welcomes the opportunity to discuss the case with the Examiner in the event that there are any questions, comments or further rejection of claims hereof.

It is believed that no fees are due in connection with this amendment. If any additional fee is due, please charge Deposit Account No. 08-2025.

Respectfully submitted,

By:


Curtis A. Vock, Reg. No. 38,356
LATHROP & GAGE LC
4845 Pearl East Circle
Suite 300
Boulder, Colorado 80301
Telephone: (720) 931-3011
Facsimile: (720) 931-3001